

CLAIMS

1. Method for securing a data packet stream, which method is characterized in that it involves the following steps:
 - 5 - arranging the packets to be sent in a matrix of D rows and L columns;
 - to each row and each column of the matrix, applying an error correction function, the result of which is a correction packet;
 - sending the resulting correction packets in addition to the data
10 packets.
2. Method according to Claim 1 in which the correction function is also applied to the row formed by correction packets resulting from the application of the correction function to each column of the matrix generating
15 an additional correction packet.
3. Method according to Claim 1 in which the correction function is also applied to the column formed by correction packets resulting from the application of the correction function to each row of the matrix generating an
20 additional correction packet.
4. Method according to any one of the preceding claims in which the headers of the correction packets contain a field for distinguishing whether they have been computed on a row or a column of the matrix.
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5. Method according to any one of the preceding claims in which the correction packets are transmitted in the same stream as the data packets.
- 30 6. Method according to any one of Claims 1 to 4 in which the correction packets are transmitted in a different stream from the one conveying the data packets.

7. Method for reconstructing lost packets in a data packet stream, which method is characterized in that it involves the following steps:

- arranging the received packets in a matrix of D rows and L columns, taking their sequence number into account;
- to each row and each column of the matrix containing at least one lost packet, applying a function for reconstructing missing packets using the received packets and the correction packet corresponding to the row or to the column.

8. Method according to Claim 7 in which the reconstruction function can also be applied to a row or a column of correction packets using an additional correction packet generated for this purpose.

9. Transmitter device for transmitting a data packet stream over a network containing computation means generating a correction packet by applying a correction function to a group of data packets and characterized in that the device contains means for applying this function to the rows and to the columns of a matrix formed by data packets.

10. Device according to Claim 9 in which the means applying the function do so according to a method described in one of Claims 1 to 6.

11. Receiver device for receiving a data packet stream over a network containing means for computing lost packets as a function of the data packets and correction packets received, characterized in that the device has means for applying these computation means to the rows and to the columns of a matrix of data packets of the stream and to the correction packets corresponding to these rows and these columns.

12. Device according to Claim 11 in which the correction packets are generated according to one of the methods described in Claims 7 and 8.